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TITLE: Solid supports for nucleic acid hybridization assays

Drawing Description Text (52):
In yet another embodiment, the present invention concerns methods and compositions to increase the oligonucleotide loading capability of control pore glass (CPG) bead columns and the like in automated oligonucleotide synthesis. The CPG bead, "burnished" glass bead, silica gel, nylon bead, etc. is activated as described above, e.g., with 3-aminopropyltriethoxysilane, and the resulting aminopropyl-CPG, silica gel or glass bead is further reacted with cyanuric chloride or a derivative thereof described above. The bead or gel is then reacted with polymer to coat the support as described above, e.g., with PEI. The amines are then coupled with the appropriate chemistries to allow oligonucleotide synthesis. The coated bead or CPG substantially amplifies oligonucleotide loading on the CPG surfaces, which is particularly important in the preparative scale synthesis of oligonucleotides, and is a convenient substitute for expensive CPG columns currently used in oligonucleotide synthesis. Of course, one skilled in the art will understand that a variety of chemistries may be used to activate the support, as described herein, as well as the subsequent activation used to conjugate the selected polymer to the support, depending on the functional groups involved.